

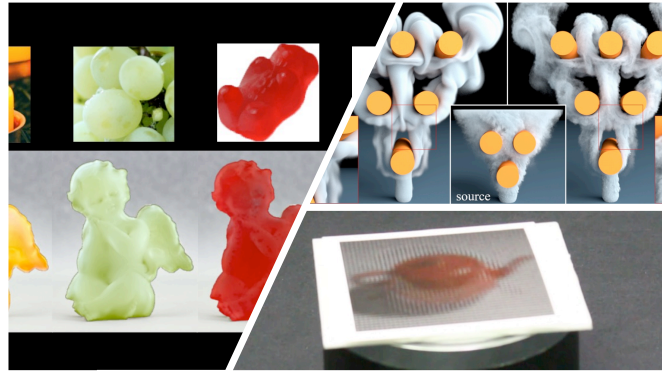
Visual Simulation of Shitsukan Using Computer Graphics

Yoshinori Dobashi

Graduate School of Information
Science and Technology,

Hokkaido University

doba@ime.ist.hokudai.ac.jp



Computer Graphics has made a significant progress in past decades and has made it possible to synthesize highly realistic image. However, there still remain a problem; it is often difficult to synthesize the desired visual appearance or behavior of objects. The user often has to spend long time on choosing appropriate parameters for creating images with the desired visual appearances. In the SHITSUKAN project, we have developed a set of methods that help the user to design the desired appearances of objects. In this talk, I will introduce some of our recent projects. Particularly, I will talk about our approach for designing appearance of fluids, reflection from a real object, and translucency in an image. I would also like to talk about efficient methods for global illumination, video-based rendering and digitization of natural objects.

Reference:

Syuhei Sato, Yoshinori Dobashi, Theodore Kim, Tomoyuki Nishita, “Example-based Turbulence Style Transfer,” ACM Transactions on Graphics (Proceedings of SIGGRAPH 2018), Vol. 37 (4), Article No. 84 (2018).

Sakurai, Y.Dobashi, K. Iwasaki, T. Nishita, “Fabricating Reflectors for Displaying Multiple Images,” ACM Trans. Graph., Vol. 37, No. 4, Article 158 (2018)

Hideki Todo, Tatsuya Yatagawa, Masataka Sawayama, Yoshinori Dobashi, Masanori Kakimoto, “Image-based translucency transfer through correlation analysis over multi-scale spatial color distribution”, The Visual Computer, Volume 35, Issue 6–8, pp 811–822 (2019).

Biography:

Yoshinori Dobashi is an associate professor at Hokkaido University in the graduate school of information science and technology, Japan since 2000. His research interests center in computer graphics including lighting models. Dobashi received his BE, ME and Ph.D in Engineering in 1992, 1994, and 1997, respectively, from Hiroshima University. He worked at Hiroshima City University from 1997 to 2000 as a research associate.

Homepage: <https://ime.ist.hokudai.ac.jp/~doba/>